

SYSTEM AND METHOD FOR REGULATING PRESSURE OF PILOT AIR TO
COMBUSTOR OF GAS TURBINE

ABSTRACT OF THE DISCLOSURE

A pilot air system for providing pilot air to a combustor of a gas turbine wherein the system includes: an inlet to receive a portion of compressed air discharged by a compressor of the gas turbine, wherein the portion of the compressed air is pilot air; a main passageway coupled to the inlet and providing a passage for the pilot air; an inline throttling valve coupled to the main passageway and metering a pressure of the compressed air in the main passageway; a pilot air compressor in series with the main passageway; a by-pass passageway for the pilot air and arranged in parallel to the main passageway and compressor, wherein the by-pass passageway receives pilot air from the main passageway downstream of the compressor and passes a portion of the compressed pilot air to the main passageway upstream of the compressor; a by-pass throttling valve inline with the by-pass passageway to meter pilot air flowing through said by-pass passageway, and the main passageway is connectable to the combustor.